



IDEM's Surface Water Quality Assessment Program

Sediment Contaminant Monitoring Program

Program Objective

The object of this program is to provide information on chemical contaminants that may be accumulating in the sediments of Indiana's streams, rivers, and lakes. Sediment monitoring can be an important tool for detecting pollutants in streams and lakes. This type of monitoring helps to locate sources of contaminants whose concentrations in other environmental media (such as water) are often too low to be easily found with routine sampling procedures. The sediment contaminant monitoring program provides supportive information for the fish contaminant monitoring program, wildlife health risk assessments, and for possible future development of models to assess changes in Indiana waters that affect aquatic life and human health.

Program Participants

This program is operated through the sampling efforts by the Biological Studies and Surveys Section of the Assessment Branch. Contract laboratory services are utilized for contaminant levels determination.

Program Description

Media:	Surface water; rivers, streams and lakes
Study Area:	Statewide
Site Selection Type:	Historically, a targeted site selection based on need for information, follow-up monitoring, or regular biennial revisits. Collection of sediment samples generally occurs in parallel with the Fish Tissue Contaminant Monitoring Program.
Sampling Sites:	Continued targeting of sites on rivers, lakes, and reservoirs.
Sampling Frequency:	5 year basin rotations for entire State (see: http://www.state.in.us/idem/owm/assessbr/master_swqms7.pdf)
Data Collected:	Chemical contaminant levels in composite grabs of surficial aquatic sediments from river, stream, reservoir and lake sediments. Many of the contaminants analyzed for may bioaccumulate in fish.

Program Product(s)

- ▶ Use support designations of Indiana waters for 305(b) Report
- ▶ Assessments for 303(d) List of Impaired Waters in Indiana.
- ▶ Impairment reports to Inspectors.
- ▶ Periodic technical reports on contaminant levels and trends.
- ▶ Environmental Indicators development in support of the Environmental Performance Partnership Agreement (EnPPA) between Indiana and U.S. EPA.
- ▶ Support of Indiana's Remedial Action Plan for the Northwest Indiana Area of Concern.

- ▶ Support of the Lake Michigan Lakewide Area Management Plan.
- ▶ Support the Triennial Review of Indiana Water Quality Standards

Technical Notes

Contaminants that may be analyzed for includes a number of metals (23) including cadmium, chromium, copper, lead, mercury, nickel, and zinc; organochlorine pesticides (27) such as DDT, chlordane, and dieldrin; and aroclors of polychlorinated biphenyls (PCBs) (8 aroclors). Additional contaminants such as polycyclic aromatic hydrocarbons (PAHs) (18), semivolatile (47), volatile (33) organic compounds, congeners of PCBs and dioxins, and tributyl tin may be analyzed for when industrial, municipal, and/or other source pollution is suspected. Other measurements and analyses include particle size distribution, percent moisture, total organic carbon, total ammonia, and acid volatile sulfide content.

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<p>IDEM Information: (317) 233-1044 or 800-451-6027 800-743-3333(TDD) toll-free for Indiana residents</p> <p>EnviroLine: (317) 232-8603 or 800-451-6027 toll-free for Indiana residents</p> <p>Fax on Demand: 800-726-8000</p> <p>Internet: www.state.in.us/idem</p>	<p><u>For More Information on IDEM's Office of Quality...</u></p> <p>Assessment Branch (Surface water quality: river, streams and lakes) Shadeland Office, Indianapolis (317) 308-3173</p> <p>Permitting Branch (NPDES permits) Indiana Government Center North, Indianapolis (317) 232-8675</p> <p>Compliance Branch (facilities assistance, inspections and compliance) Indiana Government Center North, Indianapolis (317) 232-6770</p> <p>Drinking Water Branch (Public water supply and ground water protection) Shadeland Office, Indianapolis (317) 308-3280</p> <p>Planning & Restoration Branch (Water quality standards/rules, grants and loans) Indiana Government Center North, Indianapolis (317) 233-8488</p>
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